

FIG. 1

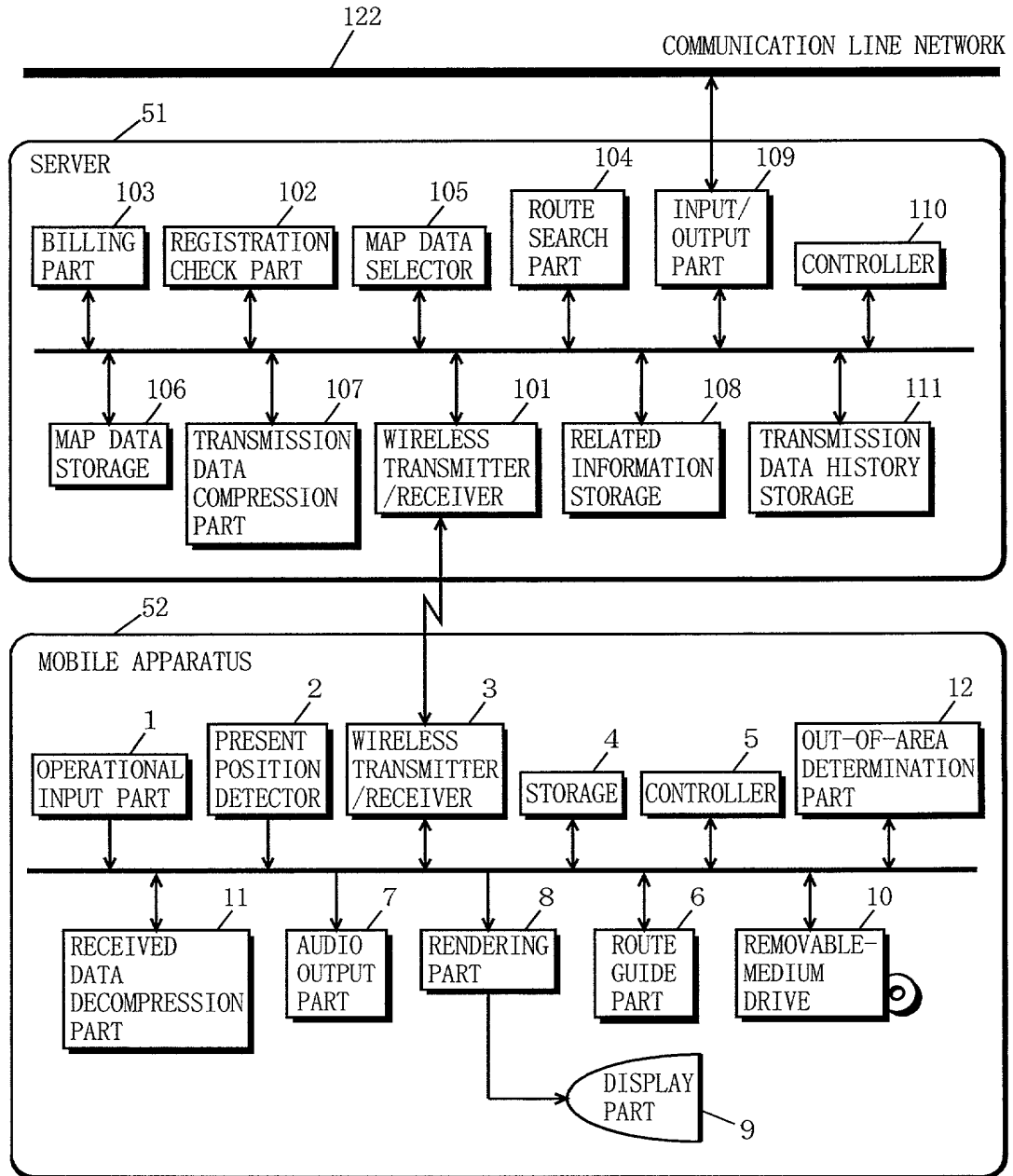


FIG. 2A

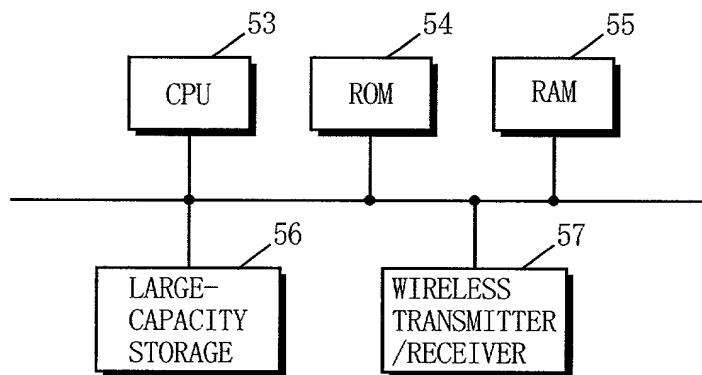


FIG. 2B

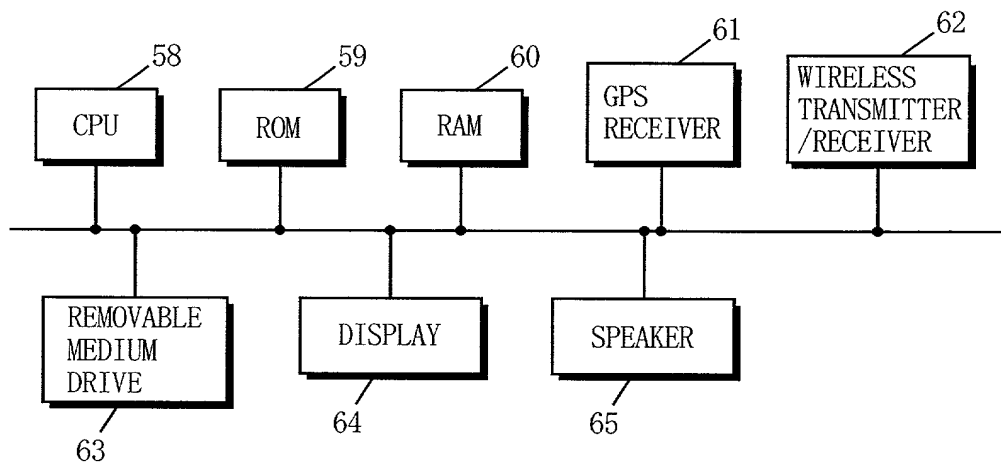


FIG. 3A

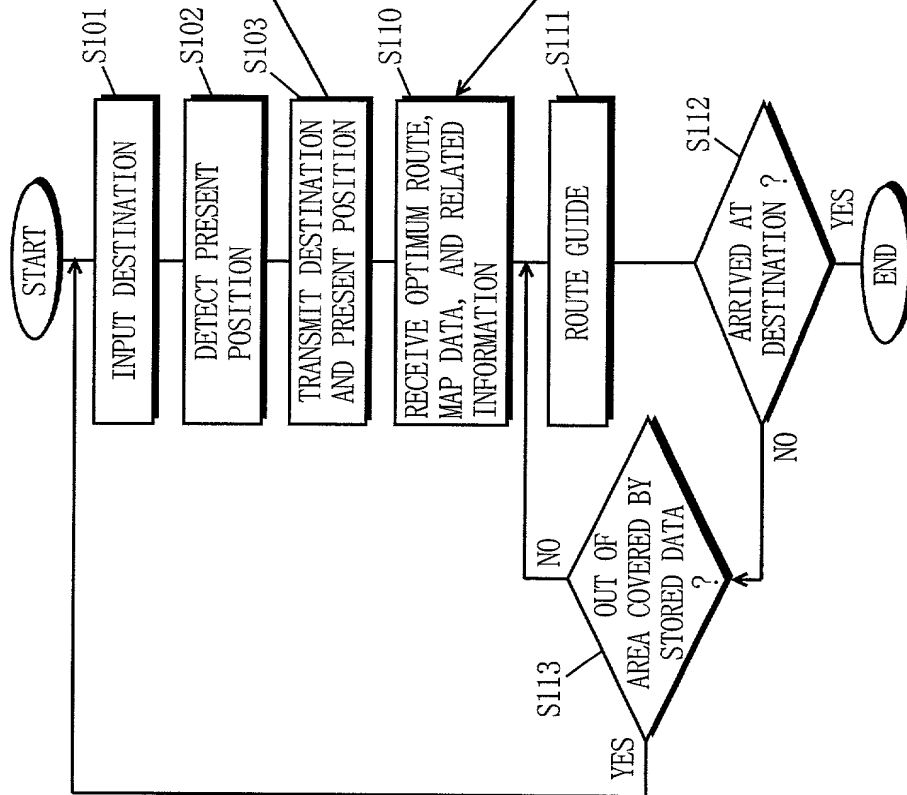
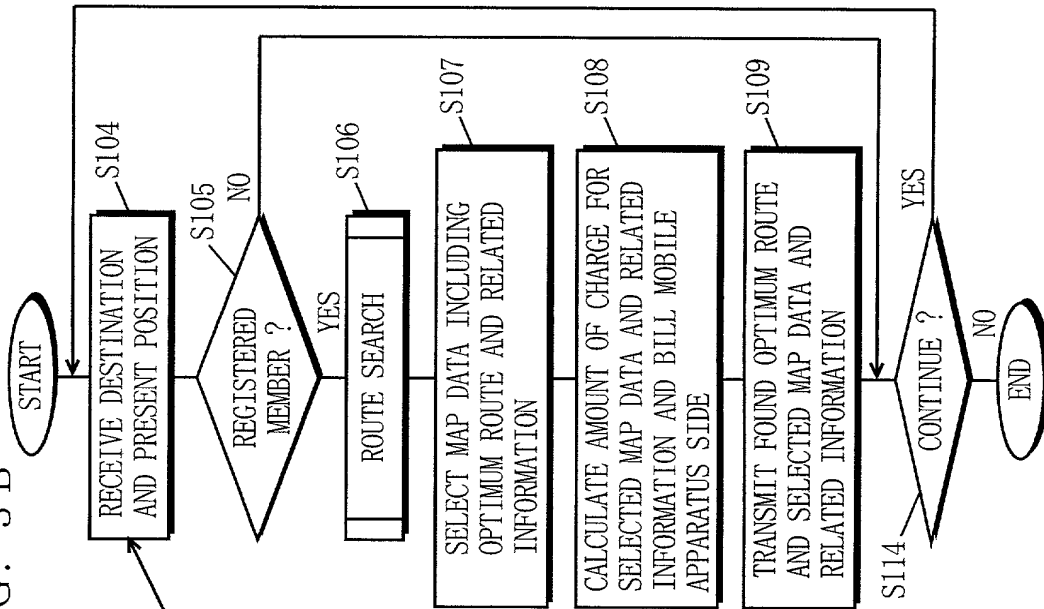


FIG. 3B



F I G. 4

REGISTRATION IDENTIFIER	PRESENT POSITION OR STARTING POINT	DESTINATION	OPTIMUM-ROUTE SEARCH METHOD IDENTIFIER	RELATED INFORMATION REQUIREMENT IDENTIFIER
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Figure 5 shows a table with 7 columns: REGISTRATION IDENTIFIER, REGISTERED DATA TYPE, DATA AMOUNT, CHARGE AMOUNT, FREQUENCY OF LOG-IN, TOTAL DATA AMOUNT, and TOTAL BILLING AMOUNT. The table has 3 rows of data.

FIG. 5

REGISTRATION IDENTIFIER	REGISTERED DATA TYPE	DATA AMOUNT	CHARGE AMOUNT	FREQUENCY OF LOG-IN	TOTAL DATA AMOUNT	TOTAL BILLING AMOUNT

FIG. 6

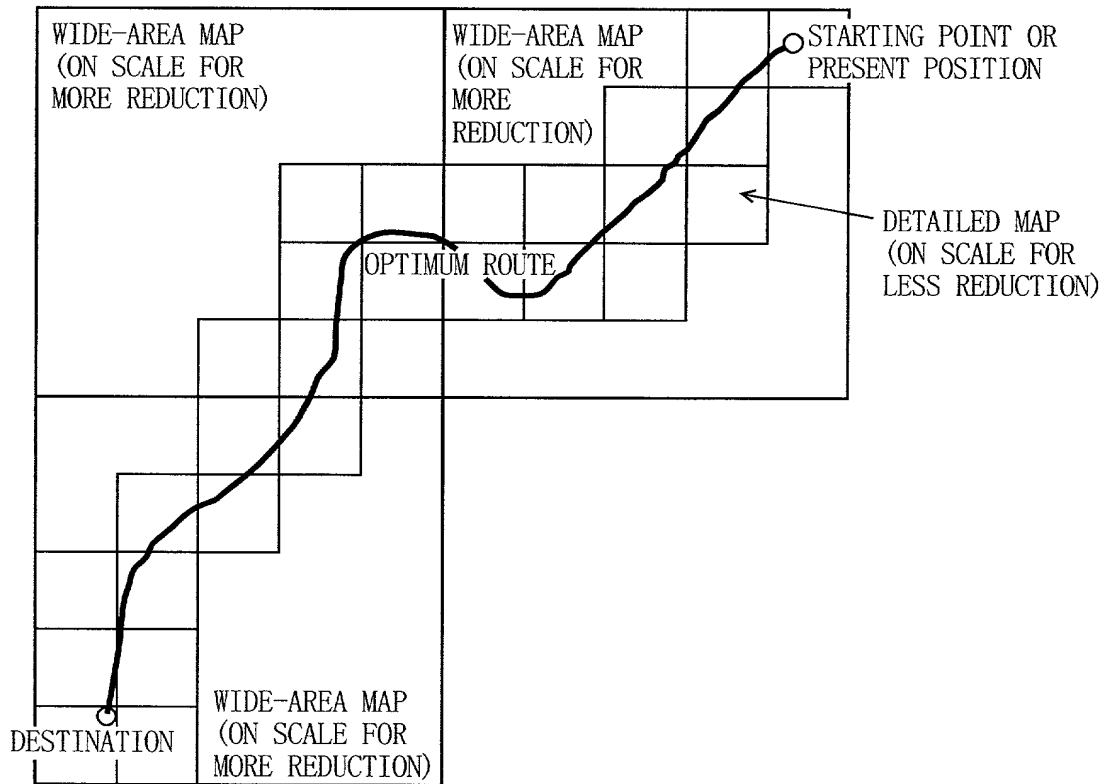


FIG. 7A

INFORMATION TYPE	UNIT PRICE
MAP DATA	10 YEN/SHEET
TRAFFIC JAM	50 YEN/AREA
EVENT/ DISCOUNT SALE	20 YEN/AREA
SIGHTSEEING INFORMATION	10 YEN/AREA
RELATED INFORMATION	

FIG. 7B

INFORMATION TYPE	UNIT PRICE
MAP DATA	10 YEN/1MB
TRAFFIC JAM	50 YEN/1KB
EVENT/ DISCOUNT SALE	20 YEN/1KB
SIGHTSEEING INFORMATION	10 YEN/1KB
RELATED INFORMATION	

FIG. 8A

INFORMATION TYPE	THE NUMBER OF SHEETS OR AREAS	PRICE
MAP DATA	2	20 YEN
TRAFFIC JAM	2	100 YEN
RELATED INFORMATION	—	—
EVENT/ DISCOUNT SALE	2	20 YEN
SIGHTSEEING INFORMATION		
TOTAL CHARGE		140 YEN

FIG. 8B

INFORMATION TYPE	INFORMATION AMOUNT	PRICE
MAP DATA	2MB	20 YEN
TRAFFIC JAM	1.5KB	75 YEN
RELATED INFORMATION	—	—
EVENT/ DISCOUNT SALE	3KB	30 YEN
SIGHTSEEING INFORMATION		
TOTAL CHARGE		125 YEN

F I G . 9

PUBLIC KEY	BILLING INFORMATION	COMPRESSED TRANSMISSION DATA
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FIG. 10

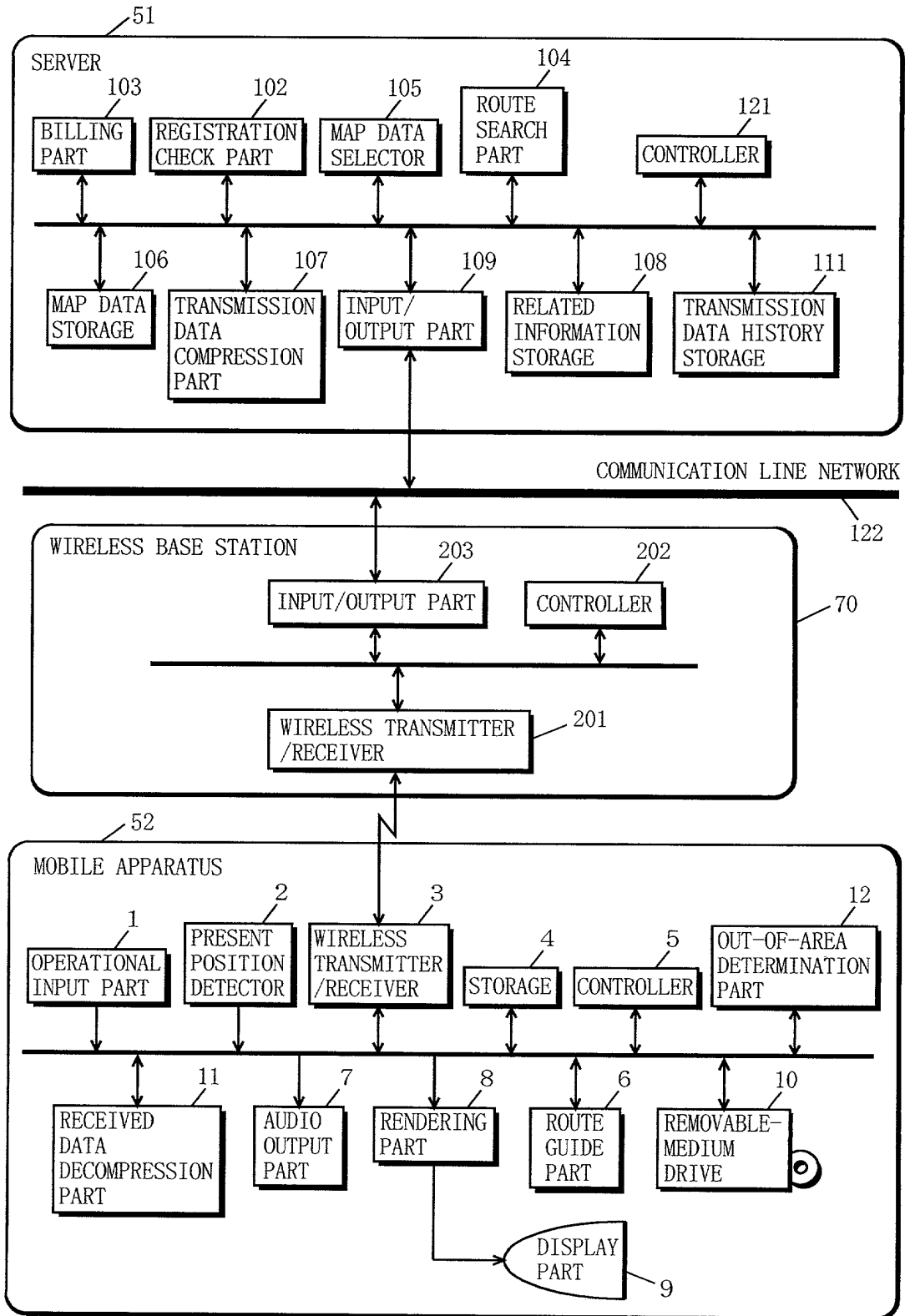


FIG. 11

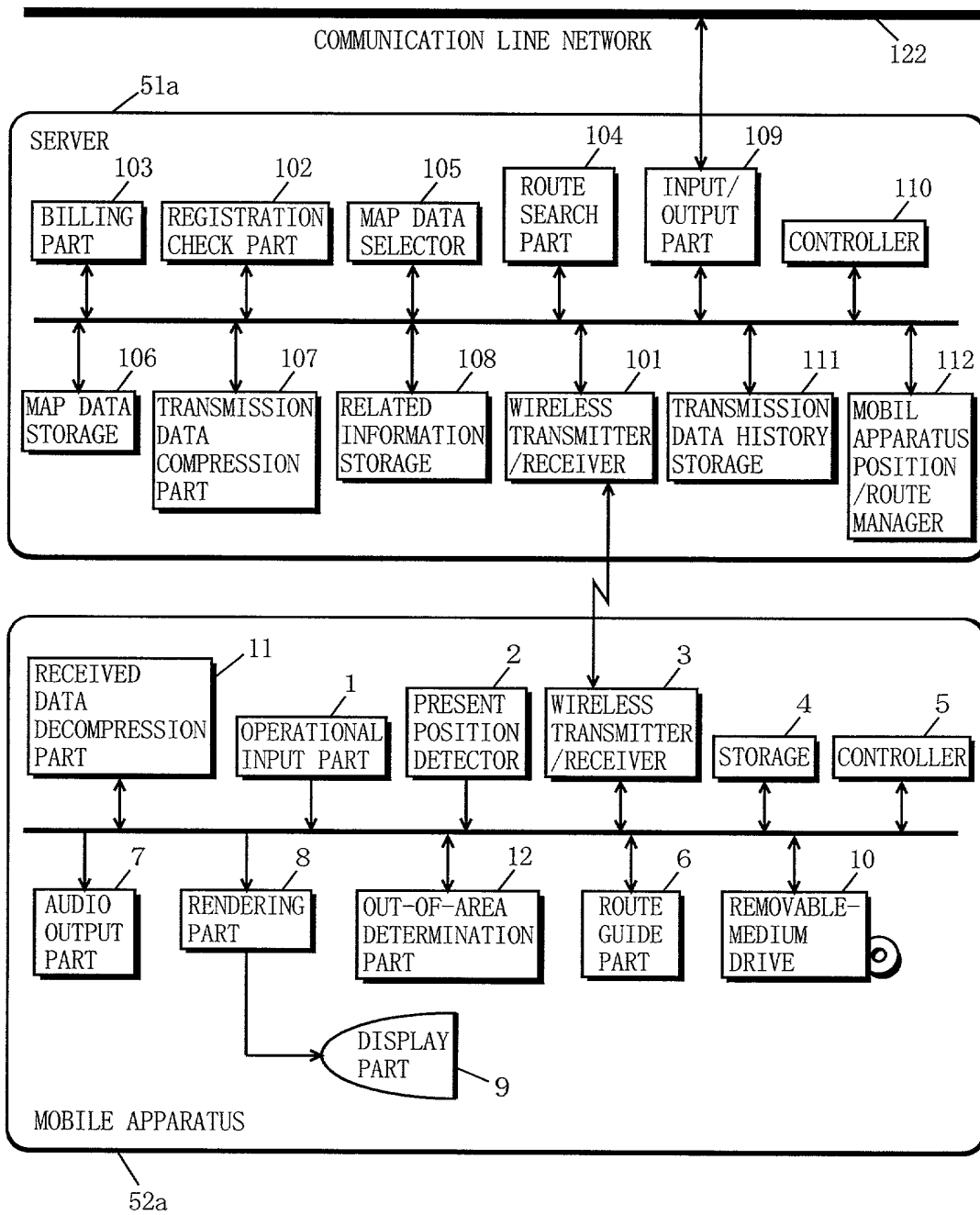
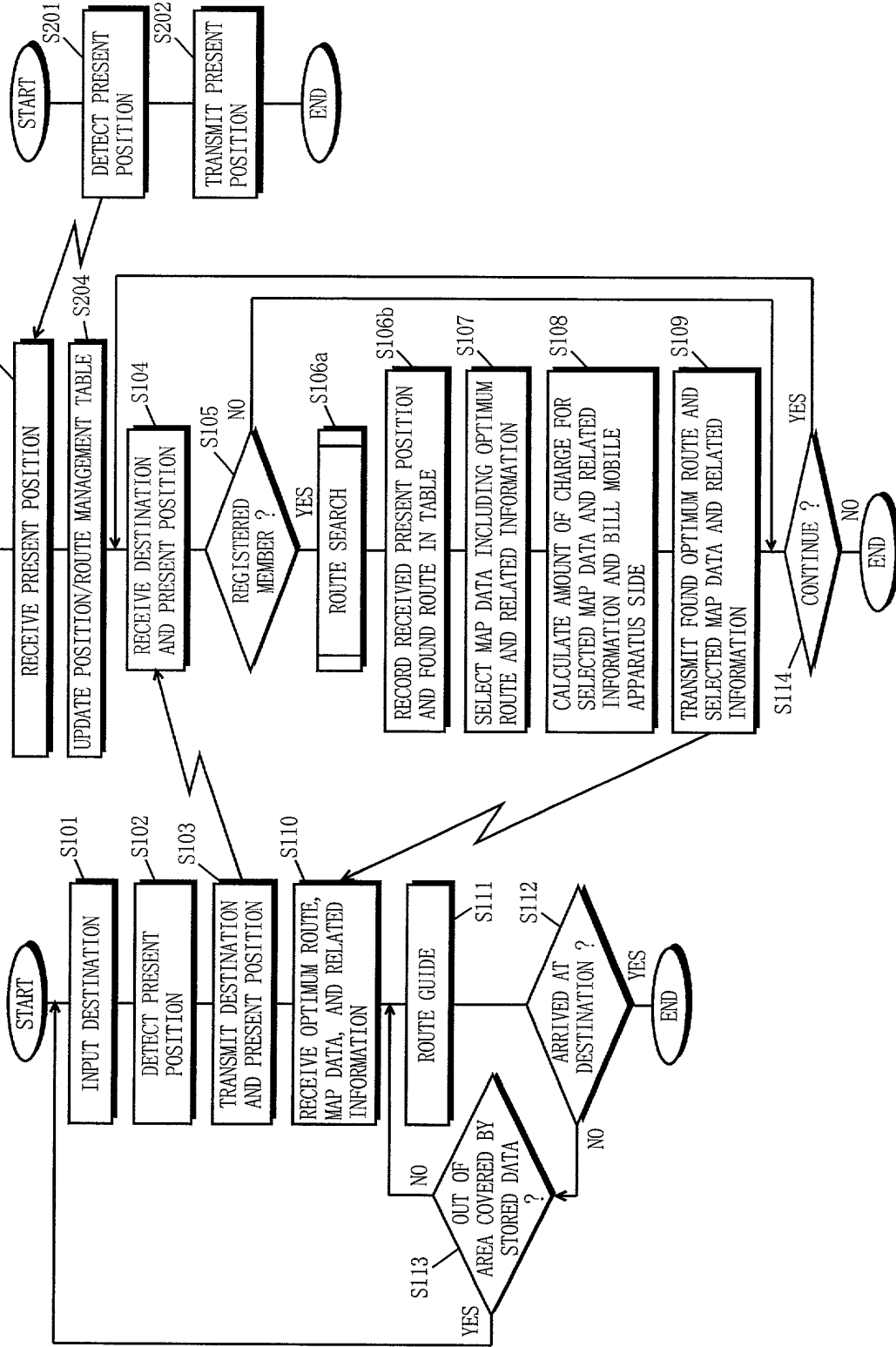


FIG. 12A

FIG. 12B

FIG. 12C



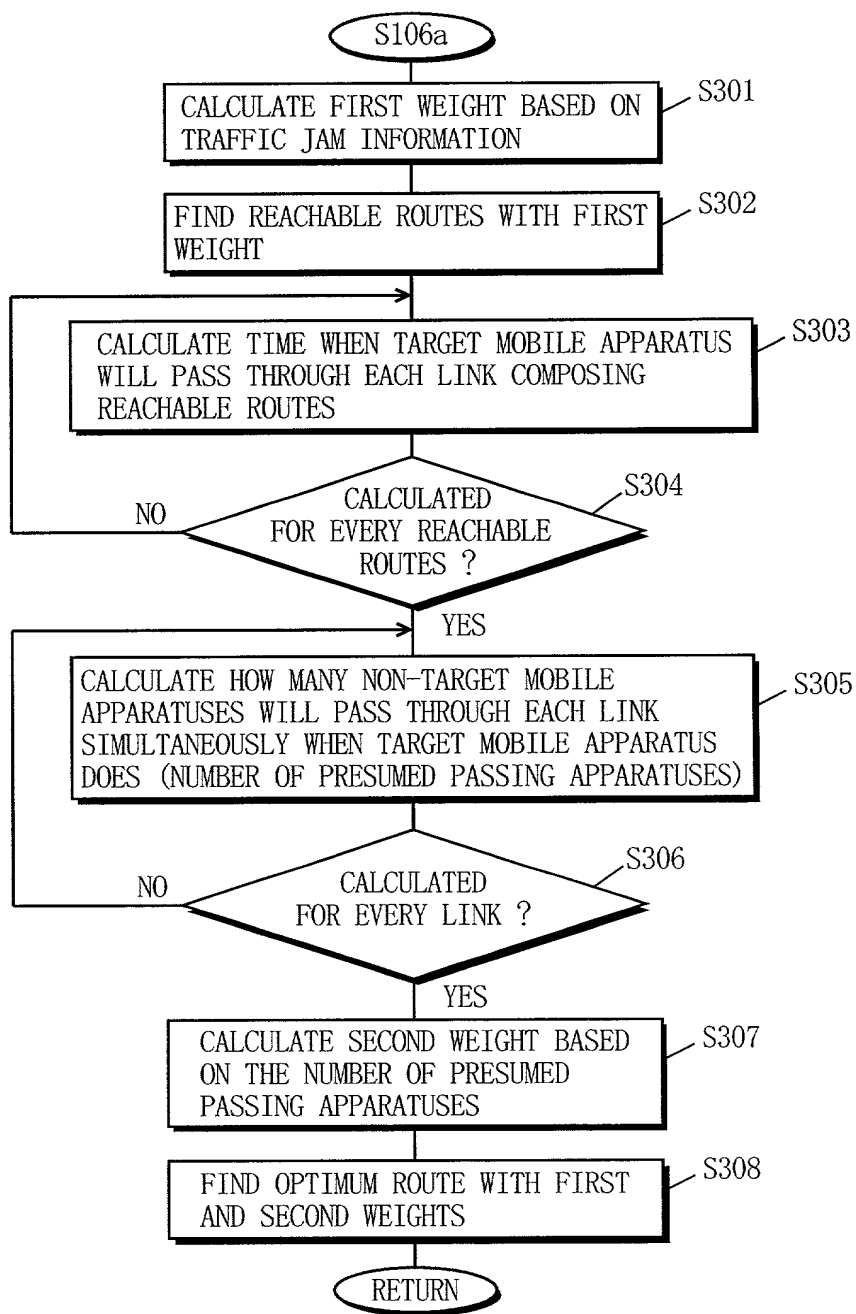
F I G. 1 3

PUBLIC KEY	COMPRESSED TRANSMISSION DATA
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F I G. 1 4

	PRESENT POSITION	FOUND ROUTE
MOBILE APPARATUS 1		
MOBILE APPARATUS 2		
⋮		

FIG. 15



F I G. 1 6

ROUTE FOR NON-TARGET MOBILE APPARATUS	$3+a_0+b_0$	$3+a_1+b_1$	$5+a_2+b_2$	T_0'
1	2		2	
ROUTE FOR NON-TARGET MOBILE APPARATUS	$2+b_3$	$4+b_4$		4
		2	$3+b_5$	
6		$2+a_3$	$3+b_6$	$3+b_7$
	2	2	2	4
		3	3	3
$d_{ij} = 3+a_{ij}+b_{ij}$		1		
S		2	2	2
	2			
				$3+a_4$
				3

FIG. 17

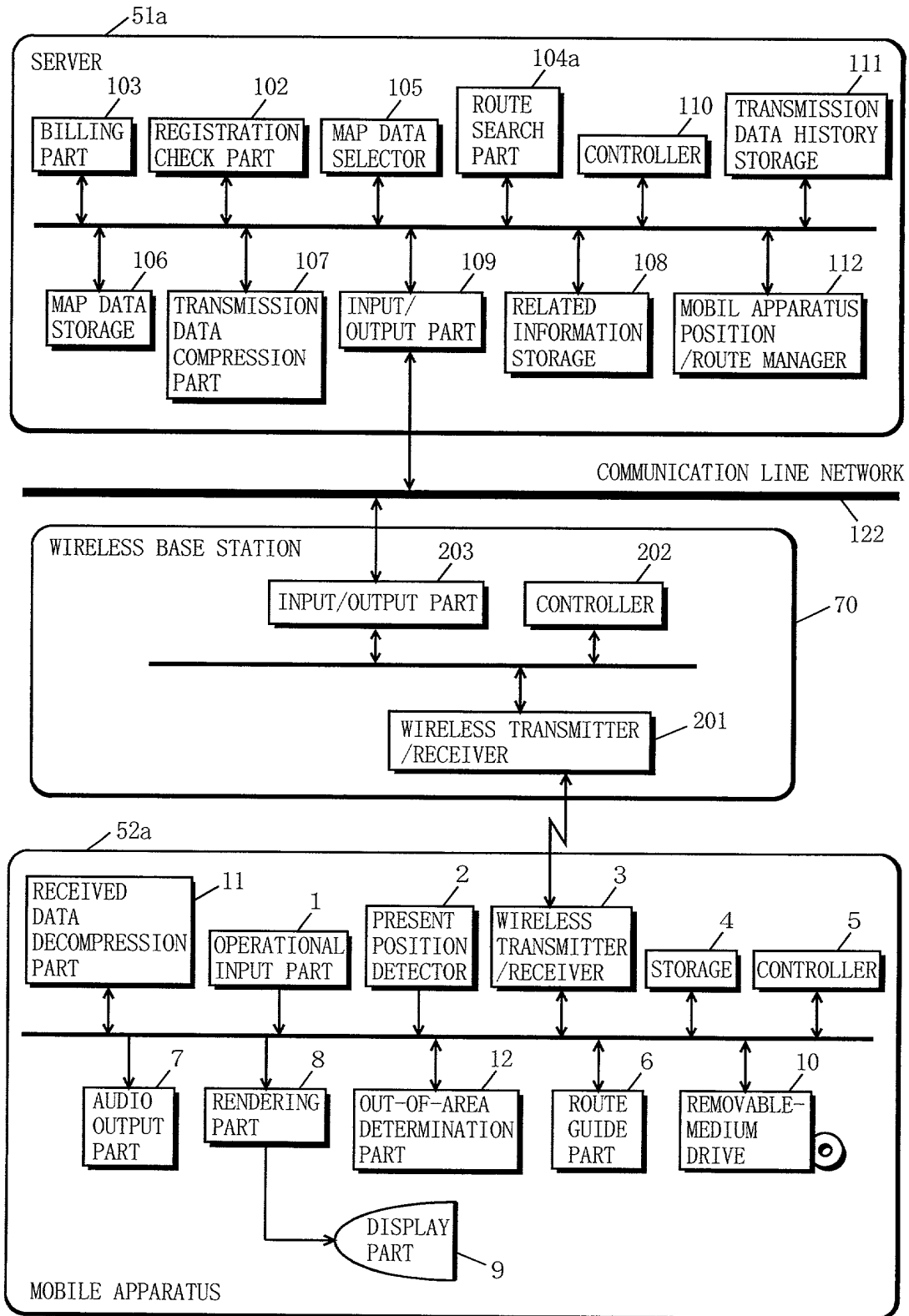


FIG. 18 PRIOR ART

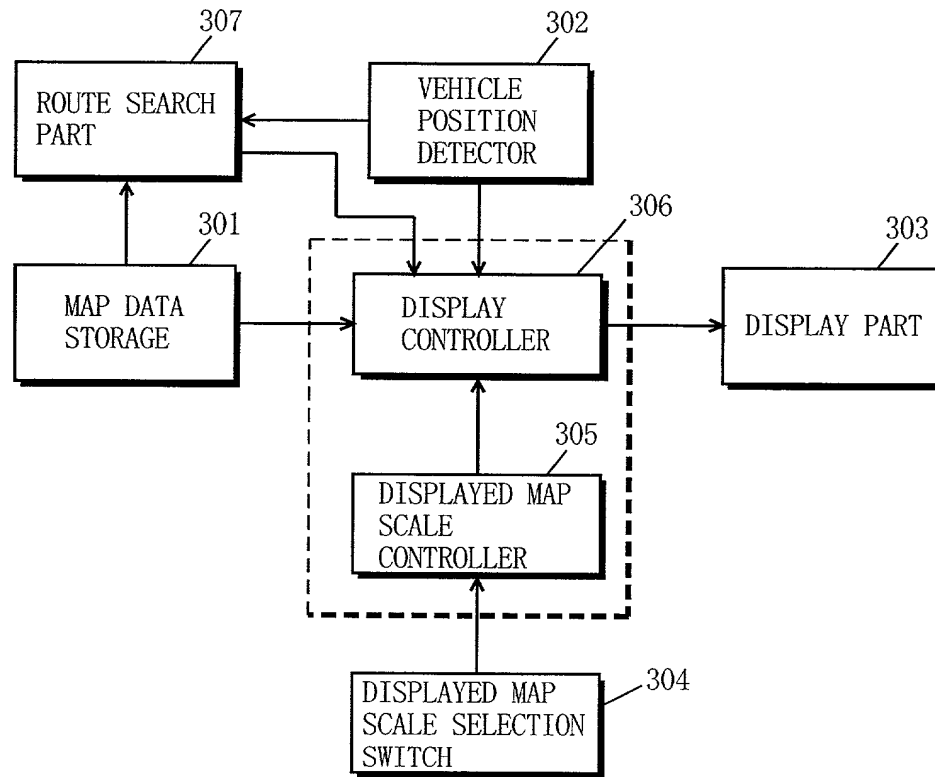


FIG. 19 PRIOR ART

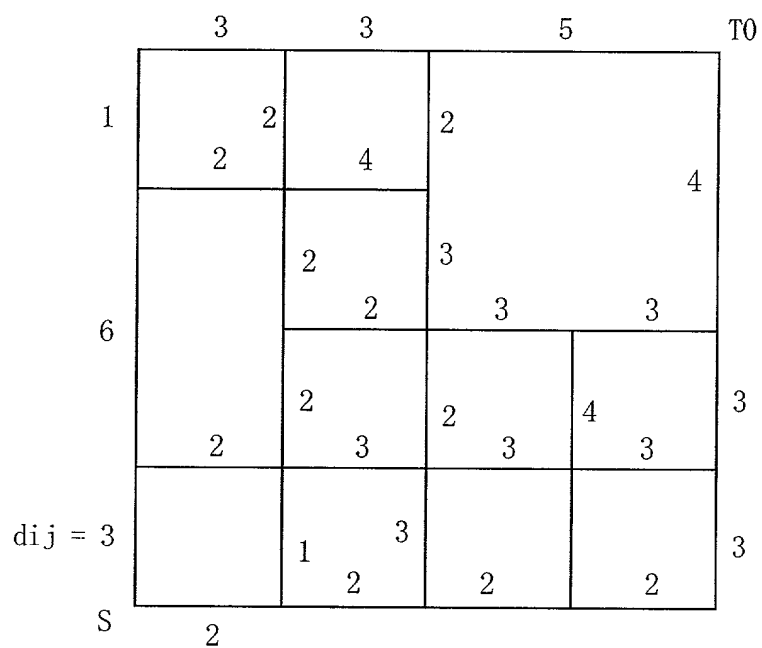


FIG. 20 PRIOR ART

